

INTERNATIONAL SEARCH REPORT

International Application No

PCT/JP2004/017134

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 F04B39/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 F04B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
X	WO 93/22557 A (EMPRESA BRASILEIRA DE COMPRESSORES S/A. - EMBRACO) 11 November 1993 (1993-11-11) page 4, line 19 - page 6, line 10; claim 1 -----	1,2,5,6, 8
Y	PATENT ABSTRACTS OF JAPAN vol. 009, no. 275 (M-426), 2 November 1985 (1985-11-02) & JP 60 119389 A (TOSHIBA KK), 26 June 1985 (1985-06-26) abstract -----	3,4,7
Y	US 2002/063017 A1 (PACZUSKI ANDREW W) 30 May 2002 (2002-05-30) paragraphs '0009!, '0010! ----- -/-	3 4

Further documents are listed in the continuation of box C

Patent family members are listed in annex

° Special categories of cited documents .

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

& document member of the same patent family

Date of the actual completion of the international search

Date of mailing of the international search report

28 April 2005

04/05/2005

Name and mailing address of the ISA

European Patent Office, P B 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel (+31-70) 340-2040, Tx 31 651 epo nl.
Fax (+31-70) 340-3016

Authorized officer

Fistas, N

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
Y	US 2002/172607 A1 (KIM TAE-MIN) 21 November 2002 (2002-11-21) paragraph '0035! -----	7
A	WO 00/01949 A (ZANUSSI ELETTROMECCANICA S.P.A; DELIBY, FREDRIK; ZONTA, CARLO) 13 January 2000 (2000-01-13) abstract -----	1
A	US 2002/170778 A1 (KIM JONG-HYUK) 21 November 2002 (2002-11-21) paragraph '0018! - paragraph '0031! -----	1
A	WO 03/012297 A (LG ELECTRONICS INC; NO, CHEAL-KI; KIM, KEE-JOO; SIM, JAI-SEONG) 13 February 2003 (2003-02-13) abstract -----	1

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/JP2004/017134

Patent document cited in search report	Publication date		Patent family member(s)		Publication date
WO 9322557	A	11-11-1993	BR 9201761 A WO 9322557 A1 CN 1079028 A ,C		09-11-1993 11-11-1993 01-12-1993
JP 60119389	A	26-06-1985	NONE		
US 2002063017	A1	30-05-2002	NONE		
US 2002172607	A1	21-11-2002	KR 2002088626 A JP 2003013855 A		29-11-2002 15-01-2003
WO 0001949	A	13-01-2000	IT PN980036 U1 BR 9907107 A CN 1300347 A ,C DE 69905572 D1 DE 69905572 T2 DK 1092092 T3 WO 0001949 A1 EP 1092092 A1 ES 2193715 T3 JP 2002519589 T SI 1092092 T1 US 6450785 B1		03-01-2000 24-10-2000 20-06-2001 03-04-2003 25-09-2003 02-06-2003 13-01-2000 18-04-2001 01-11-2003 02-07-2002 30-06-2003 17-09-2002
US 2002170778	A1	21-11-2002	KR 2002088625 A CN 1386980 A		29-11-2002 25-12-2002
WO 03012297	A	13-02-2003	WO 03012297 A1 BR 0117093 A EP 1412640 A1 US 2004208758 A1		13-02-2003 17-08-2004 28-04-2004 21-10-2004